

Release notes for ENDF/B Development n-095_Am_240
evaluation

ENDF
B-VII.**dev**

April 26, 2017

- fudge-4.0 Warnings:

1. Cross section does not match sum of linked reaction cross sections
crossSectionSum label 0: total (Error # 0): CS Sum.

WARNING: Cross section does not match sum of linked reaction cross sections! Max diff: 0.32%

2. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 1 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission] [nubar]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

3. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 2 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission] [nubar]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (4.677013e-09) is too small

4. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 3 (total): / Form 'eval': / Component 0 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

5. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 3 (total): / Form 'eval': / Component 1 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

6. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 4 (n + Am240): / Form 'eval': / Component 0 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

7. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 4 (n + Am240): / Form 'eval': / Component 1 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

8. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 8 (n[multiplicity:'energyDependent', emissionMode:'prompt'] + n[emissionMode:'1 delayed'] + gamma [total fission]): / Form 'eval': / Component 0 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

9. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 8 ($n[multiplicity:energyDependent, emissionMode:prompt] + n[emissionMode:1delayed] + gamma [total fission]$): / Form 'eval': / Component 1 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

10. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 9 ($n + (Am240_e1 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (1.326481e-09) is too small

11. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 10 ($n + (Am240_e2 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (9.006537e-10) is too small

12. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 11 ($n + (Am240_e3 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (1.602671e-09) is too small

13. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 12 ($n + (Am240_e4 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (1.255319e-09) is too small

14. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 13 ($n + (Am240_e5 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (2.045808e-09) is too small

15. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 14 ($n + (Am240_e6 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (5.347908e-10) is too small

16. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 15 ($n + (Am240_e7 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (1.881826e-10) is too small

17. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 16 ($n + (Am240_e8 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (7.855316e-10) is too small

18. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 17 ($n + (Am240_e9 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (5.250921e-09) is too small

19. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 18 ($n + (Am240_e10 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (6.986975e-10) is too small

20. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 19 ($n + (Am240_e11 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (1.585411e-09) is too small

21. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 20 ($n + (Am240_e12 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (1.999602e-09) is too small

22. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 21 ($n + (Am240_e13 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (4.579032e-09) is too small

23. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 22 ($n + (Am240_e14 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (2.680488e-09) is too small

24. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 23 ($n + (Am240_e15 \rightarrow Am240 + gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (8.884210e-10) is too small

25. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 24 ($n + (Am240_c \rightarrow Am240 + \gamma)$): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

26. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 25 ($Am241 + \gamma$): / Form 'eval': / Component 0 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

27. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 25 ($Am241 + \gamma$): / Form 'eval': / Component 1 (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

28. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 26 ($n + Am240$ [angular distribution]): / Form 'eval': (Error # 1): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

29. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 27 (n [multiplicity:'energyDependent', emissionMode:'prompt'] + n [emissionMode:'1 delayed'] + γ [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

30. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 28 (n [multiplicity:'energyDependent', emissionMode:'prompt'] + n [emissionMode:'1 delayed'] + γ [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

31. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 29 (n [multiplicity:'energyDependent', emissionMode:'prompt'] + n [emissionMode:'1 delayed'] + γ [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

32. The ratio of smallest/largest eigenvalue is quite small, possibly leading to numerical instability in downstream codes.
Section 30 (n [multiplicity:'energyDependent', emissionMode:'prompt'] + n [emissionMode:'1 delayed'] + γ [total fission] [spectrum]): / Form 'eval': (Error # 0): Condition num.

WARNING: Ratio of smallest/largest eigenvalue (0.000000e+00) is too small

• fudge-4.0 Errors:

1. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma) / Product: Am240_c / Decay$
product: γ_a / Multiplicity: (Error # 0): Domain mismatch (a)*

WARNING: Domain doesn't match the cross section domain: (158664.0 -> 20000000.0) vs (110926.0 -> 20000000.0)

2. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma) / Product: Am240_c / Distribu-$
tion: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)*

WARNING: Domain doesn't match the cross section domain: (158664.0 -> 20000000.0) vs (110926.0 -> 20000000.0)

WARNING: Domain doesn't match the cross section domain: (158664.0 -> 20000000.0) vs (110926.0 -> 20000000.0)

WARNING: Domain doesn't match the cross section domain: (200000.0 -> 20000000.0) vs (110926.0 -> 20000000.0)

WARNING: Domain doesn't match the cross section domain: (282181.0 -> 20000000.0) vs (110926.0 -> 20000000.0)

... plus 11 more instances of this message

3. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma) / Product: Am240_c / Decay$
product: γ_b / Multiplicity: (Error # 0): Domain mismatch (a)*

WARNING: Domain doesn't match the cross section domain: (158664.0 -> 20000000.0) vs (110926.0 -> 20000000.0)

4. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma) / Product: Am240_c / Decay$
product: γ_c / Multiplicity: (Error # 0): Domain mismatch (a)*

WARNING: Domain doesn't match the cross section domain: (200000.0 -> 20000000.0) vs (110926.0 -> 20000000.0)

5. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma) / Product: Am240_c / Decay$
product: γ_d / Multiplicity: (Error # 0): Domain mismatch (a)*

WARNING: Domain doesn't match the cross section domain: (282181.0 -> 20000000.0) vs (110926.0 -> 20000000.0)

6. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma) / Product: Am240_c / Decay$
product: γ_e / Multiplicity: (Error # 0): Domain mismatch (a)*

WARNING: Domain doesn't match the cross section domain: (347454.0 -> 20000000.0) vs (110926.0 -> 20000000.0)

7. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma) / Product: Am240_c / Decay$
product: γ_f / Multiplicity: (Error # 0): Domain mismatch (a)*

WARNING: Domain doesn't match the cross section domain: (500000.0 -> 20000000.0) vs (110926.0 -> 20000000.0)

8. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma) / Product: Am240_c / Decay$
product: γ_g / Multiplicity: (Error # 0): Domain mismatch (a)*

WARNING: Domain doesn't match the cross section domain: (200000.0 -> 20000000.0) vs (110926.0 -> 20000000.0)

9. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma)$ / Product: $Am240_c$ / Decay
product: γ_h / Multiplicity: (Error # 0): Domain mismatch (a)*
- WARNING: Domain doesn't match the cross section domain: (233979.0 -> 20000000.0) vs (110926.0 -> 20000000.0)
10. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma)$ / Product: $Am240_c$ / Decay
product: γ_i / Multiplicity: (Error # 0): Domain mismatch (a)*
- WARNING: Domain doesn't match the cross section domain: (300000.0 -> 20000000.0) vs (110926.0 -> 20000000.0)
11. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma)$ / Product: $Am240_c$ / Decay
product: γ_j / Multiplicity: (Error # 0): Domain mismatch (a)*
- WARNING: Domain doesn't match the cross section domain: (399672.0 -> 20000000.0) vs (110926.0 -> 20000000.0)
12. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma)$ / Product: $Am240_c$ / Decay
product: γ_k / Multiplicity: (Error # 0): Domain mismatch (a)*
- WARNING: Domain doesn't match the cross section domain: (500000.0 -> 20000000.0) vs (110926.0 -> 20000000.0)
13. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma)$ / Product: $Am240_c$ / Decay
product: γ_l / Multiplicity: (Error # 0): Domain mismatch (a)*
- WARNING: Domain doesn't match the cross section domain: (317328.0 -> 20000000.0) vs (110926.0 -> 20000000.0)
14. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma)$ / Product: $Am240_c$ / Decay
product: γ_m / Multiplicity: (Error # 0): Domain mismatch (a)*
- WARNING: Domain doesn't match the cross section domain: (399672.0 -> 20000000.0) vs (110926.0 -> 20000000.0)
15. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma)$ / Product: $Am240_c$ / Decay
product: γ_n / Multiplicity: (Error # 0): Domain mismatch (a)*
- WARNING: Domain doesn't match the cross section domain: (500000.0 -> 20000000.0) vs (110926.0 -> 20000000.0)
16. Energy range of data set does not match cross section range
*reaction label 16: $n + (Am240_c \rightarrow Am240 + \gamma)$ / Product: $Am240_c$ / Decay
product: γ_o / Multiplicity: (Error # 0): Domain mismatch (a)*
- WARNING: Domain doesn't match the cross section domain: (600000.0 -> 20000000.0) vs (110926.0 -> 20000000.0)
17. Calculated and tabulated Q values disagree.
reaction label 17: $n[multiplicity:2'] + Am239 + \gamma$ (Error # 0): Q mismatch
- WARNING: Calculated and tabulated Q-values disagree: -6054807.277404785 eV vs -5951520. eV!

18. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_a / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

19. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_a / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

20. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_b / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

21. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_b / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

22. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_c / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

23. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_c / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

24. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_d / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

25. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_d / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

26. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_e / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

27. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_e / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

28. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_f / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

29. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_f / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

30. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_g / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

31. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_g / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

32. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_h / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

33. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_h / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

34. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_i / Multiplicity: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

35. Energy range of data set does not match cross section range
reaction label 17: n[multiplicity:'2'] + Am239 + gamma / Product: gamma_i / Distribution: / uncorrelated - angular - isotropic: (Error # 0): Domain mismatch (a)

WARNING: Domain doesn't match the cross section domain: (6500000.0 -> 20000000.0) vs (5976520.0 -> 20000000.0)

36. Calculated and tabulated Q values disagree.
reaction label 18: n[multiplicity:'3'] + Am238 + gamma (Error # 0): Q mismatch
- WARNING: Calculated and tabulated Q-values disagree: -13157226.51641846 eV vs -1.30539e7 eV!
37. Calculated and tabulated Q values disagree.
reaction label 20: Am241 + gamma (Error # 0): Q mismatch
- WARNING: Calculated and tabulated Q-values disagree: 6543804.783233643 eV vs 6647090. eV!
38. Multiplicity does not match sum of linked product multiplicities!
multiplicitySum label 18: n + (Am240_c ->Am240 + gamma) total gamma multiplicity (Error # 0): summedMultiplicityMismatch
- WARNING: Multiplicity does not match sum of linked product multiplicities! Max diff: 30.26%
39. Multiplicity does not match sum of linked product multiplicities!
multiplicitySum label 19: n[multiplicity:'2'] + Am239 + gamma total gamma multiplicity (Error # 0): summedMultiplicityMismatch
- WARNING: Multiplicity does not match sum of linked product multiplicities! Max diff: 100.00%
40. Calculated and tabulated Q values disagree.
fissionComponent label 0: /reactionSuite/fissionComponents/fissionComponent[@label='0'] (Error # 0): Q mismatch
- WARNING: Calculated and tabulated Q-values disagree: 224549545138.1986 eV vs 2.058381e8 eV!
41. Calculated and tabulated Q values disagree.
fissionComponent label 1: /reactionSuite/fissionComponents/fissionComponent[@label='1'] (Error # 0): Q mismatch
- WARNING: Calculated and tabulated Q-values disagree: 224549545138.1986 eV vs 2.058381e8 eV!
42. Calculated and tabulated Q values disagree.
fissionComponent label 2: /reactionSuite/fissionComponents/fissionComponent[@label='2'] (Error # 0): Q mismatch
- WARNING: Calculated and tabulated Q-values disagree: 224549545138.1986 eV vs 2.058381e8 eV!
43. Calculated and tabulated Q values disagree.
fissionComponent label 3: /reactionSuite/fissionComponents/fissionComponent[@label='3'] (Error # 0): Q mismatch
- WARNING: Calculated and tabulated Q-values disagree: 224549545138.1986 eV vs 2.058381e8 eV!
44. A covariance matrix was not positive semi-definite, so it has negative eigenvalues.
Section 26 (n + Am240 [angular distribution]): / Form 'eval': / LegendreLValue L=1 vs 1 (Error # 0): Bad evs
- WARNING: 10 negative eigenvalues! Worst case = -6.156491e-05

- njoy2012 Warnings:

1. Evaluation has no resonance parameters given
unresr...calculation of unresolved resonance cross sections (0): No RR

```
---message from unresr---mat 9540 has no resonance parameters
      copy as is to nout
```

2. In some evaluations, the partial fission reactions MT=19, 20, 21, and 38 are given in File 3, but no corresponding distributions are given. In these cases, it is assumed that MT=18 should be used for the fission neutron distributions.
heatr...prompt kerma (0): HEATR/hinit (3)

```
---message from hinit---mt19 has no spectrum
      mt18 spectrum will be used.
```

3. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (1): HEATR/hinit (4)

```
---message from hinit---mf6, mt 16 does not give recoil za= 95239
      one-particle recoil approx. used.
```

4. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (2): HEATR/hinit (4)

```
---message from hinit---mf6, mt 17 does not give recoil za= 95238
      one-particle recoil approx. used.
```

5. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (3): HEATR/hinit (4)

```
---message from hinit---mf6, mt 51 does not give recoil za= 95240
      one-particle recoil approx. used.
```

6. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (4): HEATR/hinit (4)

```
---message from hinit---mf6, mt 52 does not give recoil za= 95240
      one-particle recoil approx. used.
```

7. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (5): HEATR/hinit (4)

```
---message from hinit---mf6, mt 53 does not give recoil za= 95240
      one-particle recoil approx. used.
```

8. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (6): HEATR/hinit (4)

```
---message from hinit---mf6, mt 54 does not give recoil za= 95240
      one-particle recoil approx. used.
```

9. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (7): HEATR/hinit (4)

```
---message from hinit---mf6, mt 55 does not give recoil za= 95240
      one-particle recoil approx. used.
```

10. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (8): HEATR/hinit (4)
- message from hinit---mf6, mt 56 does not give recoil za= 95240
one-particle recoil approx. used.
11. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (9): HEATR/hinit (4)
- message from hinit---mf6, mt 57 does not give recoil za= 95240
one-particle recoil approx. used.
12. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (10): HEATR/hinit (4)
- message from hinit---mf6, mt 58 does not give recoil za= 95240
one-particle recoil approx. used.
13. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (11): HEATR/hinit (4)
- message from hinit---mf6, mt 59 does not give recoil za= 95240
one-particle recoil approx. used.
14. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (12): HEATR/hinit (4)
- message from hinit---mf6, mt 60 does not give recoil za= 95240
one-particle recoil approx. used.
15. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (13): HEATR/hinit (4)
- message from hinit---mf6, mt 61 does not give recoil za= 95240
one-particle recoil approx. used.
16. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (14): HEATR/hinit (4)
- message from hinit---mf6, mt 62 does not give recoil za= 95240
one-particle recoil approx. used.
17. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (15): HEATR/hinit (4)
- message from hinit---mf6, mt 63 does not give recoil za= 95240
one-particle recoil approx. used.
18. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (16): HEATR/hinit (4)
- message from hinit---mf6, mt 64 does not give recoil za= 95240
one-particle recoil approx. used.
19. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (17): HEATR/hinit (4)

- message from hinit---mf6, mt 65 does not give recoil za= 95240
one-particle recoil approx. used.
20. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (18): HEATR/hinit (4)
- message from hinit---mf6, mt 91 does not give recoil za= 95240
one-particle recoil approx. used.
21. Recoil is not given, so one-particle recoil approximation used.
heatr...prompt kerma (19): HEATR/hinit (4)
- message from hinit---mf6, mt102 does not give recoil za= 95241
photon momentum recoil used.
22. There is a problem with the fission energy release.
heatr...prompt kerma (30): HEATR/nheat (3)
- message from nheat---changed q from 2.058381E+08 to 1.954353E+08
for mt 18
23. Evaluation has no resonance parameters given
purr...probabalistic unresolved calculation (0): No RR
- message from purr---mat 9540 has no resonance parameters
copy as is to nout